

UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: M. Yavuz Dedigil et al.
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Group Art Unit: 1712
Examiner: Nicole R. Blan
Title: DISHWASHER COMPRISING A FILTER SYSTEM

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APPEAL BRIEF

Pursuant to 37 CFR 1.192, Appellants hereby file an appeal brief in the above-identified application. This Appeal Brief is accompanied by the requisite fee set forth in 37 CFR 1.17(f).

Table of Contents

(1)	REAL PARTY IN INTEREST	3
(2)	RELATED APPEALS AND INTERFERENCES	3
(3)	STATUS OF CLAIMS.....	3
(4)	STATUS OF AMENDMENTS.....	3
(5)	SUMMARY OF CLAIMED SUBJECT MATTER.....	3
(6)	GROUND OF REJECTION TO BE REVIEWED ON APPEAL.....	5
(7)	ARGUMENT	5
(8)	CONCLUSION	11
	CLAIMS APPENDIX	12
	EVIDENCE APPENDIX	17
	RELATED PROCEEDINGS APPENDIX	18

(1) REAL PARTY IN INTEREST

The real party in interest is BSH Bosch und Siemens Hausgeräte GmbH.

(2) RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) STATUS OF CLAIMS

Claims 16-30 are the basis of the appeal of the pending claims. Claims 1-15 were canceled in the July 13, 2006 Preliminary Amendment. Claims 16 and 27 are independent.

(4) STATUS OF AMENDMENTS

The pending claims identified in the Claims Appendix correspond to the claims entered following the submission of the Amendment on April 14, 2010.

(5) SUMMARY OF CLAIMED SUBJECT MATTER

The present invention as embodied in independent claim 16 relates to a dishwashing machine having a novel filter system for cleaning dishwashing liquid 12. The invention also

relates to a method of using the novel filter system to clean the dishwashing liquid 12 as embodied in independent claim 27.

In the present invention, the filter system includes a foam volume 11, and the filter system and a container 1 of the dishwashing machine are communicated with one another (page 6, lines 8-10) such that at least some of the dishwashing liquid 12 can be discharged from the dishwashing container 1 in association with a washing cycle of the dishwashing machine to a foam volume 11 for passage of the discharged dishwashing liquid 12 through the foam volume 11. In this manner, dishwashing residue contained in the dishwashing liquid 12 is at least partially absorbed or retained by the foam volume 11 (page 6, lines 24-26).

In a method of the invention as recited in independent claim 27, dishwashing residue contained in the dishwashing liquid is at least partially absorbed or retained by the foam volume, the method comprising the steps of:

discharging at least some of the dishwashing liquid from the washing cycle of the dishwashing machine through the foam volume, wherein dishwashing residue contained in the dishwashing liquid is at least partially absorbed or retained by the foam volume (page 6, lines 24-26);

conducting at least a portion of cleaned dishwashing liquid back to the washing cycle of the dishwashing machine (page 7, lines 2-6); and

conducting at least a portion of the foam volume containing the retained dishwashing residue exteriorly of the dishwashing machine (page 7, lines 9-12).

In the invention, capturing dishwashing residue in the foam allows for prevention of the dishwashing residue clogging parts of the dishwasher. It also allows for a better cleaning result.

(6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

(a) Whether claims 16-22, 24, 26-28 and 30 are unpatentable under 35 U.S.C. § 103(a) over Kim et al. (U.S. Patent Publication No. 2002/0074026) in view of Kemper (U.S. Patent No. 6,413,366).

(b) Whether claim 25 is unpatentable under § 35 U.S.C. 103(a) over Kim et al. in view of Kemper, and further in view of Damron et al. (U.S. Patent No. 6,402,855).

(c) Whether claim 29 is unpatentable under 35 U.S.C. § 103(a) over Kim et al. in view of Kemper, and further in view of Valenzuela et al. (U.S. Patent No. 5,234,112).

(7) ARGUMENT

Claims 16-22, 24, 26-28 and 30 are NOT unpatentable under 35 U.S.C. § 103(a) over Kim et al. (U.S. Patent Publication No. 2002/0074026) in view of Kemper (U.S. Patent No. 6,413,366).

The present invention recites "a filter system for cleaning dishwashing liquid, the filter system including a foam volume and the filter system and the dishwashing container being communicated with one another such that at least some of the dishwashing liquid can be

discharged from the dishwashing container in association with a washing cycle of the dishwashing machine to the foam volume for passage of the discharged dishwashing liquid through the foam volume, wherein dishwashing residue contained in the dishwashing liquid is at least partially absorbed or retained by the foam volume.” The grounds of rejection acknowledge that this feature is not disclosed in Kim et al. Rather, Kim et al. is used in the grounds of rejection to show a conventional dishwasher having a filter system. In the conventional Kim et al. dishwasher, referring to Figure 1, the filtering means includes a water collector 60 disposed below a bottom surface of a case 10, a primary filter (coarse filter) 62, and a secondary filter (fine filter) 64 which are installed in the water collector 60. Larger garbage particles are filtered out by the primary filter 62 preventing a drain port from clogging, and smaller garbage particles that have not been filtered by the primary filter 62 are filtered by the secondary filter 64, and discharged together with the washing water through the drain port of the drain pump 50 (see paragraph [0012]).

To make up for the lack of teaching of a filter system having a foam volume as in the present invention, the grounds of rejection state that Kemper teaches a filter for removing contaminants from a solution using foam such that the liquid solution is passed through the foam in order to remove contaminants from the liquid (citing the Abstract; col. 2, line 30 - col. 3, line 7 of Kemper). Therefore, the grounds of rejection allege that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the filter taught by Kemper in place of the filter of Kim et al. with a reasonable expectation of success

because Kemper teaches that the filter removes contaminants from an incoming liquid by use of foam in order to retain the contaminants in the foam.

Appellants respectfully submit that the aforementioned combination can only be made using impermissible hindsight in view of Appellants' own teachings in the present specification. In response, in the Advisory action, the grounds of rejection generally note that "it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper (citing *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971)).

Appellants respectfully submit that the grounds of rejection point to no teachings in either Kim et al. or Kemper of using a Kemper-type filter in a dishwasher. Rather, Kemper is related to a filter process for separating at least a part of suspended contaminating particles out of a suspension containing fibrous material. The flotation process in Kemper is quite different than the foam dishwashing process used in the present invention. The Kemper process utilizes the differences between fibrous material and undesired solid particles in such a way that the fibrous material remains in the fiber suspension due to its hydrophilic nature whereas the mentioned material particles are hydrophobic and, therefore, move into the foam along with the air bubbles. As such, the material particles that Kemper relates to are primarily

related to ink particles and adhesives, fine plastic particles, and resins (see col. 1, lines 11-36). Accordingly, one of ordinary skill in the art would not look to Kemper for a dishwashing filter solution, and therefore any such knowledge attributable to a Kemper process being used in a dishwasher is gleaned only from Appellants' own disclosure.

Next, the grounds of rejection state at page 3 of the June 25, 2010 Office Action and in the Advisory Action in response to Appellants' arguments in the April 14, 2010 Amendment that Kemper teaches a filter for removing contaminants from a solution using foam in order to remove contaminants from the liquid. Because both Kim et al. and Kemper may teach filter systems for removing contaminants from liquids, the grounds of rejection conclude that it would have been obvious to one skilled in the art to substitute one filter system for the other to achieve the predictable result of removing contaminants from liquids.

Appellants respectfully submit that Kim et al. teach at paragraph [0014] that its dishwasher and filter system requires both the circulation pump 40 for use in the washing and rinsing processes and the drain pump 50 for use in the draining process. Therefore, at paragraph [0014], Kim et al. teach that such an arrangement requiring both pumps has problems in that the structure thereof is complex and the production costs thereof are high. Accordingly, Appellants respectfully submit that one of ordinary skill in the art at the time of invention would not be motivated by the teaching of Kim et al. to further add to this complexity and cost by including additional components and structure required for the introduction of a gas into the Kim et al. system. As such, Kim et al. teach away from the

present invention. Therefore, Appellants respectfully submit that independent claims 16 and 27 are allowable, as well as their corresponding dependent claims.

Further, dependent claim 17 recites a feature whereby “the filter system includes a foam developer operable to mix liquid formed of at least one of the dishwashing liquid and a non-dishwashing liquid with air to produce the foam volume.” The grounds of rejection state “regarding the recitation “mix ... at least one of the dishwashing liquid and a non-dishwashing liquid with air”, this recitation is a statement of intended use which does not patentably distinguish over the modified Kim et al. system since the modified Kim et al. system meets all the structural elements of the claims and is capable of mixing the dishwashing liquid with air if so desired (citing MPEP 2114). However, Appellants respectfully submit that neither Kim et al. nor Kemper teach the claimed structural feature of a foam developer that mixes dishwashing liquid and non-dishwashing liquid.

Finally, the grounds of rejection state that Appellants’ arguments fail to comply with 37 CFR § 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. Appellants respectfully submit that the grounds of rejection acknowledge that Kim et al. do not disclose or suggest “a filter system for cleaning dishwashing liquid, the filter system including a foam volume and the filter system and the dishwashing container being communicated with one another such that at least some of the dishwashing liquid can be discharged from the dishwashing container in association with a washing cycle of the dishwashing machine to the foam volume for passage of the

discharged dishwashing liquid through the foam volume, wherein dishwashing residue contained in the dishwashing liquid is at least partially absorbed or retained by the foam volume.” Kemper does not make up for this deficiency for the reasons discussed above and as such, the grounds of rejection have not established a prima facie case for obviousness.

Claim 25 is NOT unpatentable under § 35 U.S.C. 103(a) over Kim et al. in view of Kemper, and further in view of Damron et al. (U.S. Patent No. 6,402,855).

Claim 25 is allowable at least based on its dependence on claims 16/17 for the reasons discussed above, the differences not made up for by Damron.

Claim 29 is NOT unpatentable under 35 U.S.C. § 103(a) over Kim et al. in view of Kemper, and further in view of Valenzuela et al. (U.S. Patent No. 5,234,112).

Claim 29 is allowable at least based on its dependence on claim 27 for the reasons discussed above, the differences not made up for by Valenzuela et al.

(8) CONCLUSION

In view of the foregoing discussion, Appellants respectfully request reversal of the Examiner's rejections.

Respectfully submitted,

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CLAIMS APPENDIX

1-15. (Canceled)

16. (Rejected) A dishwashing machine comprising:

a dishwashing container in which items to be subjected to the application of a dishwashing liquid thereto are disposed; and

a filter system for cleaning dishwashing liquid, the filter system including a foam volume and the filter system and the dishwashing container being communicated with one another such that at least some of the dishwashing liquid can be discharged from the dishwashing container in association with a washing cycle of the dishwashing machine to the foam volume for passage of the discharged dishwashing liquid through the foam volume, wherein dishwashing residue contained in the dishwashing liquid is at least partially absorbed or retained by the foam volume.

17. (Rejected) The dishwashing machine according to claim 16, wherein the filter system includes a foam developer operable to mix liquid formed of at least one of the dishwashing liquid and a non-dishwashing liquid with air to produce the foam volume.

18. (Rejected) The dishwashing machine according to claim 16 and further comprising a filter container is provided for retaining therein the foam volume.

19. (Rejected) The dishwashing machine according to claim 18, wherein the filter container includes a wall located at a selected one of the bottom of the filter container and another location on the filter container, the wall having openings over at least a portion thereof through which at least one of air and a mixture of liquid and air can be introduced into the filter container.

20. (Rejected) The dishwashing machine according to claim 18, wherein the filter container includes a wall located at a selected one of the top of the filter container and another location on the filter container, the wall having at least one opening through which the dishwashing liquid can be introduced into the filter container.

21. (Rejected) The dishwashing machine according to claim 20, wherein at least one opening in the wall for introducing dishwashing liquid into the filter container is configured as a distributor nozzle such that the dishwashing liquid is introduced into the filter container in fine jets.

22. (Rejected) The dishwashing machine according to claim 18, wherein the filter container has a first outlet through which cleaned dishwashing liquid is discharged from the filter container and a second outlet through which the foam volume is discharged from the filter container.

23. (Rejected) The dishwashing machine according to claim 18 and further comprising a three-way valve and the filter container has an outlet through which both cleaned dishwashing liquid and the foam volume is discharged from the filter container to the three-way valve via selective positioning of which cleaned dishwashing liquid is conducted back into the dishwashing cycle and discharged foam volume is passed into a waste water pipe of the dishwashing machine.

24. (Rejected) The dishwashing machine according to claim 22, wherein at least one of the first outlet and the second outlet has a variable-height overflow.

25. (Rejected) The dishwashing machine according to claim 17, wherein dishwashing liquid is supplied to the foam developer by a circulating pump from the dishwashing cycle of the dishwashing machine.

26. (Rejected) The dishwashing machine according to claim 18, wherein the filter container is disposed between the dishwashing container and an outer wall of the dishwashing machine.

27. (Rejected) A method for operating a dishwashing machine, the dishwashing machine including a dishwashing container in which items to be subjected to the application of a dishwashing liquid thereto are disposed and a filter system for cleaning dishwashing liquid, the filter system including a foam volume and the filter system and the

dishwashing container being communicated with one another such that at least some of the dishwashing liquid can be discharged from the dishwashing container in association with a washing cycle of the dishwashing machine to the foam volume for passage of the discharged dishwashing liquid through the foam volume, wherein dishwashing residue contained in the dishwashing liquid is at least partially absorbed or retained by the foam volume, the method comprising the steps of:

- discharging at least some of the dishwashing liquid from the washing cycle of the dishwashing machine through the foam volume, wherein dishwashing residue contained in the dishwashing liquid is at least partially absorbed or retained by the foam volume;

- conducting at least a portion of cleaned dishwashing liquid back to the washing cycle of the dishwashing machine; and

- conducting at least a portion of the foam volume containing the retained dishwashing residue exteriorly of the dishwashing machine.

28. (Rejected) The dishwashing machine according to claim 27 and further comprising producing the foam volume in a foam developer in which liquid, preferably dishwashing liquid, is mixed with air.

29. (Rejected) The dishwashing machine according to claim 27 and further comprising a selected one of producing the foam volume in a filter container and introducing the foam volume in a filter container after production of the foam volume.

30. (Rejected) The dishwashing machine according to claim 27 and further comprising effecting the passage of the dishwashing liquid to be cleaned through the foam volume via introduction of the dishwashing liquid in the form of fine jets by at least one distributor nozzle.

EVIDENCE APPENDIX

None

RELATED APPEALS APPENDIX

None